

Appl. No. 10/710,596
Amdt. dated March 16, 2007
Reply to Office action of November 16, 2006

Amendments to the Claims

This listing of the Claims will replace all prior versions and listings of the claims in this patent application.

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Listing of the Claims

Claims 1-42. (canceled)

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43. (currently amended) A circuit ~~circuitry~~ component comprising:

- a semiconductor substrate;
- a metallization structure over said semiconductor substrate;
- a silicon-nitride layer over said metallization structure;
- a circuit trace over said silicon-nitride layer; and
- 15 a resistor connected to said circuit trace.

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44. (currently amended) The circuit ~~circuitry~~ component as claimed in claim 43, wherein said resistor comprises silicon with a dopant of boron.

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45. (currently amended) The circuit ~~circuitry~~ component as claimed in claim 43, wherein said resistor comprises silicon with a dopant of phosphorous.

46. (currently amended) The circuit ~~circuitry~~ component as claimed in claim 43, wherein said resistor comprises silicon with a dopant of arsenic.

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47. (currently amended) The circuit ~~circuitry~~ component as claimed in claim 43, wherein said resistor comprises silicon with a dopant of gallium.

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48. (currently amended) The circuit ~~circuitry~~ component as claimed in claim 43 further comprising a polymer layer between said silicon-nitride layer and said circuit trace.

5 49. (currently amended) The circuit ~~circuitry~~ component as claimed in claim 48, wherein said polymer layer comprises polyimide (PI).

50. (currently amended) The circuit ~~circuitry~~ component as claimed in claim 48, wherein said polymer layer comprises benzocyclobutene (BCB).

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51. (currently amended) The circuit ~~circuitry~~ component as claimed in claim 43 further comprising a polymer layer on said circuit trace.

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52. (currently amended) The circuit ~~circuitry~~ component as claimed in claim 51, wherein said polymer layer comprises polyimide (PI).

53. (currently amended) The circuit ~~circuitry~~ component as claimed in claim 51, wherein said polymer layer comprises benzocyclobutene (BCB).

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54. (currently amended) The circuit ~~circuitry~~ component as claimed in claim 43, wherein said circuit trace comprises a copper layer.

55. (currently amended) The circuit ~~circuitry~~ component as claimed in claim 54, wherein said circuit trace further comprises a nickel layer over said copper layer.

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56. (currently amended) The circuit ~~circuitry~~ component as claimed in claim 54, wherein said circuit trace further comprises a gold layer over said copper layer.

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57. (currently amended) The circuit ~~circuitry~~-component as claimed in claim 54,
wherein said circuit trace further comprises a titanium-containing layer under said
copper layer.
- 5 58. (currently amended) The circuit ~~circuitry~~-component as claimed in claim 57,
wherein said titanium-containing layer comprises tungsten.
59. (currently amended) The circuit ~~circuitry~~-component as claimed in claim 54,
wherein said circuit trace further comprises a chromium-containing layer under said
10 copper layer.
60. (currently amended) The circuit ~~circuitry~~-component as claimed in claim 43,
wherein said circuit trace comprises a gold layer.
- 15 61. (currently amended) The circuit ~~circuitry~~-component as claimed in claim 60,
wherein said circuit trace further comprises a titanium-containing layer under said
gold ~~copper~~-layer.
62. (currently amended) The circuit ~~circuitry~~-component as claimed in claim 61,
20 wherein said titanium-containing layer comprises tungsten.
63. (currently amended) The circuit ~~circuitry~~-component as claimed in claim 43,
wherein said metallization structure comprises aluminum.
- 25 64. (currently amended) A circuit ~~circuitry~~-component comprising:
multiple MOS devices;
a metallization structure over said multiple MOS devices;
a passivation layer over said metallization structure;

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a circuit trace over said passivation layer; and
a resistor connected to said circuit trace.

5 65. (currently amended) The circuit ~~circuitry~~ component as claimed in claim 64,
wherein said resistor comprises silicon with a dopant of boron.

66. (currently amended) The circuit ~~circuitry~~ component as claimed in claim 64,
wherein said resistor comprises silicon with a dopant of phosphorous.

10 67. (currently amended) The circuit ~~circuitry~~ component as claimed in claim 64,
wherein said resistor comprises silicon with a dopant of arsenic.

15 68. (currently amended) The circuit ~~circuitry~~ component as claimed in claim 64,
wherein said resistor comprises silicon with a dopant of gallium.

69. (currently amended) The circuit ~~circuitry~~ component as claimed in claim 64
further comprising a polymer layer between said passivation ~~silicon-nitride~~ layer and
said circuit trace.

20 70. (currently amended) The circuit ~~circuitry~~ component as claimed in claim 69,
wherein said polymer layer comprises polyimide (PI).

25 71. (currently amended) The circuit ~~circuitry~~ component as claimed in claim 69,
wherein said polymer layer comprises benzocyclobutene (BCB).

72. (currently amended) The circuit ~~circuitry~~ component as claimed in claim 64
further comprising a polymer layer on said circuit trace.

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73. (currently amended) The circuit ~~circuitry~~ component as claimed in claim 72,
wherein said polymer layer comprises polyimide (PI).

5 74. (currently amended) The circuit ~~circuitry~~ component as claimed in claim 72,
wherein said polymer layer comprises benzocyclobutene (BCB).

75. (currently amended) The circuit ~~circuitry~~ component as claimed in claim 64,
wherein said circuit trace comprises a copper layer.

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76. (currently amended) The circuit ~~circuitry~~ component as claimed in claim 75,
wherein said circuit trace further comprises a nickel layer over said copper layer.

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77. (currently amended) The circuit ~~circuitry~~ component as claimed in claim 75,
wherein said circuit trace further comprises a gold layer over said copper layer.

78. (currently amended) The circuit ~~circuitry~~ component as claimed in claim 75,
wherein said circuit trace further comprises a titanium-containing layer under said
copper layer.

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79. (currently amended) The circuit ~~circuitry~~ component as claimed in claim 78,
wherein said titanium-containing layer comprises tungsten.

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80. (currently amended) The circuit ~~circuitry~~ component as claimed in claim 75,
wherein said circuit trace further comprises a chromium-containing layer under said
copper layer.

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81. (currently amended) The circuit ~~circuitry~~-component as claimed in claim 64,
wherein said circuit trace comprises a gold layer.

5 82. (currently amended) The circuit ~~circuitry~~-component as claimed in claim 81,
wherein said circuit trace further comprises a titanium-containing layer under said
gold ~~copper~~-layer.

10 83. (currently amended) The circuit ~~circuitry~~-component as claimed in claim 82,
wherein said titanium-containing layer comprises tungsten.

84. (currently amended) The circuit ~~circuitry~~-component as claimed in claim 64,
wherein said metallization structure comprises aluminum.

15 85. (new) The circuit component as claimed in claim 43, wherein said resistor is in
said semiconductor substrate.

86. (new) The circuit component as claimed in claim 43, wherein said resistor is under
said silicon-nitride layer.

20 87. (new) The circuit component as claimed in claim 64 further comprising a
semiconductor substrate under said metallization structure, wherein said resistor and
said multiple MOS devices are in said semiconductor substrate.

25 88. (new) The circuit component as claimed in claim 64, wherein said resistor is under
said passivation layer.